

PATENT
CUSTOMER NUMBER, 22,852
Attorney Docket No. 01064.0011-04000

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of:

Richard LEVY

Serial No.: 09/357,957

Filed: July 21, 1999

For: LUBRICANT COMPOSITIONS AND
METHODS

Commissioner for Patents and Trademarks
Washington, DC 20231

Sir:

APPELLANT'S BRIEF ON APPEAL PURSUANT TO 37 C.F.R. § 1.192

Appellant submits the following brief in triplicate accompanied by the fee required by 37 C.F.R. § 1.17(c). The brief sets forth the authorities and arguments on which appellant will rely to maintain the appeal.

(1) Real Party Interest

The inventor assigned the parent application Serial No. 08/487,436, filed June 7, 1995 to Lee County Mosquito Control District. The assignment was recorded at reel 7878, frame 0620 on August 23, 1995, which makes Lee County Mosquito Control District the real party in interest.

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(2) Related Appeals and Interferences

Appellant has co-pending appeals before the Board of Patent Appeals and Interferences in the following related applications:



The Patent and Trademark Office has labeled the cover of their file for application Serial No. 08/943,125 as follows:

U. S. PATENT AND TRADEMARK OFFICE
RETURN TO (PTO 1056)
INTERFERENCE SERVICE BRANCH
This case is involved in an
Interference Proceeding

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The Patent Office has not notified appellant that they have declared an interference in any of the foregoing applications, even though they indicated on the file of application Serial No. 08/943,125 “[t]his case is involved in an Interference Proceeding.” The Board also took the position, when contacted by appellant’s attorneys by telephone, that the Patent Office had not declared an interference, in application Serial No. 08/943,125. Lastly, the Board’s decision in the pending appeal could directly affect, or be directly affected by, or having a bearing on the decision in the co-pending appeals.

Appellant calls the Board's attention to the United States Patent Application of Martin C. Flautt et. al., Serial No. 09/190,866 filed November 13, 1998. Appellant advised the Examiner that appellant's Application Serial No. 09/779,588 copies claims from the corresponding Flautt et. al. PCT Application WO 00/29486. The Patent and

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Trademark Office, as of the filing of this brief, has not declared an interference between appellant's Application Serial No. 09/779,588. and Flautt et. al., Serial No. 09/190,866.

Appellant also calls the Board's attention to the United States Patent Application of Serge Rebouillat et. al., Serial No. 09/443,695 filed November 19, 1999. Appellant advised the Examiner that appellant's Application Serial No. 09/779,559, filed February 9, 2001 copies claims from the corresponding Rebouillat et. al.. PCT Application WO 00/31752. The Patent and Trademark Office, as of the filing of this brief, has not declared an interference between appellant's Application Serial No. 09/779,559 and Rebouillat et. al., Serial No. 09/443,695.

(3) Status Of Claims

Appellant submitted a preliminary amendment on July 21, 1999 at the time of filing the present application which added claims 29-43 and cancelled claims 2-28. Claims 29-43 comprise the claims in the Application as of the filing of the Notice of Appeal in this Application on January 2, 2002. The Examiner finally rejected the application on December 19, 2001, but prior to that final rejection, appellant, on September 7, 2001, canceled claim 1 without prejudice or disclaimer and amended claims 29-31, 34, 36, 37, 38, 40 and 41.

(4) Status Of Amendments

The Examiner has entered all amendments to the claims.

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(5) Summary Of Invention

The invention comprises a lubricant composition of matter consisting essentially of a superabsorbent polymer that absorbs greater than about 100 times its weight in water combined with a material for decreasing friction between moving surfaces where the material is a petroleum oil lubricant, or grease thereof, a solid inorganic compound, a solid organic compound, water containing a lubricant additive, a phosphate, a fatty oil, fatty acid or wax, a synthetic oil lubricant, or grease thereof, or a soap, and mixtures thereof. The lubricant additives include without limitation, an oxidation inhibitor, a rust inhibitor, anti-wear agent, detergent-dispersant, pour-point depressant, viscosity-index improver or foam inhibitor. (Written Description, paragraph bridging pages 19 and 20, and page 20, first full paragraph.)

(6) Issues

The issues on appeal are:

1. Whether Claims 29 to 43 are enabled and have written description support under 35 U.S.C. § 112, first paragraph;
2. Whether Claims 29 to 43 are definite under 35 U.S.C. § 112, second paragraph;
3. Whether Claim 29, 35 and 42 are anticipated under 35 U.S.C. § 102(b) by the Admitted Prior Art; and
4. Whether Claims 29, 35-36 and 41-43 are obvious over Sayad combined with the Admitted Prior Art in view of Hopkins and Guersen et al.

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(7) Grouping Of Claims

Claims 29-43 do not stand or fall together. Appellant will demonstrate the separate patentability of the claims in the subsequent Argument.

(8)(a) Argument

A. The Rejections Under 35 U.S.C. § 112, First Paragraph

The Written Description Enables Claims 29-43

The Examiner rejects claims 29-43 for not including the steps for manufacturing appellants' lubricant, such as mixing the lubricant into the superabsorbent polymer prior to or after exposing it to water or high humidity.

The Examiner perceives these steps as critical or essential to the practice of the invention, but not included in the claims. Although the written description describes this method for manufacture of the compositions of the present invention at pages 28-29, the disclosure also describes the invention broadly.

The Manual of Patent Examining Procedure (M.P.E.P.) addresses this type of rejection as follows:

In determining whether an unclaimed feature is critical, the entire disclosure must be considered, features which are merely preferred are not to be considered critical.

Limiting an applicant to the preferred materials in the absence of limiting prior art would not serve the constitutional purpose of promoting progress in the useful arts. Therefore, an enablement rejection based on the grounds that a disclosed critical limitation is missing from a claim should be made only when the language of the specification makes it clear that the limitation is critical for the invention to function as intended. Broad language in the disclosure, including the abstract, omitting an allegedly critical feature, tends to rebut the argument of criticality.

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M.P.E.P. § 2146.08 (c)(citations omitted) (emphasis added).

Appellant points out in this respect, that the paragraph bridging pages 19-20 of the written description describes the invention as comprising "a lubricant composition of matter comprising a superabsorbent polymer combined with a material for decreasing friction between moving surfaces. . ." Appellant repeats this description of the invention several times throughout the specification without confining the invention to the method the Examiner refers to in the December 19, 2001, Office Action (Paper No. 12).

Even though the Examiner focuses on the last paragraph of page 28 and the first two paragraphs of page 29 of the written description (the last three paragraphs on page 31 of related pending application Serial No. 09/359,809) regarding one of several methods of making the composition (see, for example, pp. 35-36), this does not constitute the only method. As stated in M.P.E.P. § 2164.08(c) the Examiner focusing on this aspect of the disclosure ignores the entire disclosure, which she must consider. The Examiner has also failed to take into account the broad language in the disclosure which omits, or makes no reference to the feature on pages 28 and 29 that she refers to in her December 19 Office Action.

B. The Appellant Was In Possession Of The Invention Of Claims 29-43

The Examiner rejects claims 29-43 under 35 U.S.C. § 112 first paragraph allegedly as containing subject matter not described in the specification in such a way so as to reasonably convey to one skilled in the relevant art that the appellant had possession of the claimed invention at the time he filed the application. The Examiner

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argues that claim 29 and the claims depending from claim 29 focus on mixtures of materials for decreasing friction, whereas the first full paragraph on page 18 of the application describes "each individually as a friction [sic] additive." (December 19 Office Action, page 3 first full paragraph.) Appellant believes that the Examiner in citing the first full paragraph on page 18 meant to refer to an "anti-friction additive" since this part of the written description describes "Metal Working Lubricants" known in the art.

The application supports claims to "mixtures" of lubricants. Appellant points out in this regard that in addition to the lubricants on page 18, the written description describes lubricants at pages 6 through the end of page 18, such as petroleum lubricants, synthetic lubricants, greases, and solid lubricants in addition to the metal working lubricants on page 18, and other lubricants also disclosed on page 18. The first full paragraph on page 23 as well as the second and third paragraphs on page 23 then summarize the classes of lubricants employed according to the invention, concluding with the statement that "mixtures of each of the foregoing lubricants may be used including mixtures of two to about three or about four lubricants." (Emphasis added). The application therefore includes "mixtures of lubricants."

C. The Rejections Under 35 U.S.C. § 112, Second Paragraph

The Appellant Was Clearly In Possession Of Mixtures Of Lubricants At The Time The Invention Was Filed And This Objection Should Be Reversed

The Examiner rejects claims 29-43 under 35 U.S.C. § 112 second paragraph allegedly as indefinite for failing to particularly point out and distinctly claim the subject matter which appellant regards as the invention. The Examiner specifically focuses on

the language of claim 29 employing the phrase "and mixtures thereof" arguing that the phrase makes the Markush Group improper. The Examiner suggests employing the conjunction "or" in lieu of "and."

The Manual of Patent Examining Procedure (M.P.E.P.) § 2173.05(h) p. 2100-151 (Rev. 1, Feb. 2000) last paragraph, shows the Patent Office approves either conjunction and the interchangeability of these conjunctions by indicating "[f]or example 'wherein an R is a material selected from the group consisting of A, B, C and D' is a proper limitation, then 'wherein R is A, B, C, or D' shall also be considered proper." (Emphasis added). The Examiner by accepting the conjunction "or" implies that the conjunction "and" is acceptable as well. Accordingly, appellant has not amended Claim 29 as suggested by the Examiner.

Appellant also believes use of the conjunction "or" would create confusion relative to the part of the claim that describes the lubricants as including "mixtures," since the Court of Appeals for the Federal Circuit has recently interpreted "or" to exclude combinations of elements in a claim. The court indicated the conjunction "and" would have avoided this interpretation. Kustom Signals, Inc. v. Applied Concepts, Inc., 264 Fed. 3rd 1326, 1331, 60 U.S.P.Q. 2nd 1135, 1138 (Fed. Cir., 2001).

D. **The Rejection Under 35 U.S.C. § 102(b)**
Claims 29, 35 and 42 Are Not Anticipated

The Examiner rejects claims 29, 35 and 42 under 35 U.S.C. §102(b) as anticipated by the Admitted Prior Art, i.e., Levy, United States Patent Number 4,985,251 combined with Brannon-Peppas.

Claim 29 describes the lubricant as a petroleum oil or grease optionally with a lubricant additive, claim 35 describes it as water containing a lubricant additive and claim 42 as a synthetic oil or grease optionally with a lubricant additive, all of which are in combination with a superabsorbent polymer that absorbs greater than about 100 times its weight in water

The Examiner has applied Brannon-Peppas in a manner to amplify the Levy disclosure. Neither Levy nor Brannon-Peppas teach appellant's invention of claim 29, 35 or 42. The claims describe a lubricant additive as an antioxidant, rust inhibitor, antiwear compound, extreme pressure additive, detergent, dispersant, pour point depressant, viscosity-index improver, or foam inhibitor. Both Brannon-Peppas and the Levy patent fail to teach these additives.

The Levy film forming agent, Arosurf® MSF, is poly(oxy-1, 2-ethanediyl), alpha-isoctadecylomega hydroxy (CAS 52292-1), a compound that does not fall into the Claim 42 materials for decreasing friction. Claim 42 relates to synthetic oil lubricants or greases thereof. Nothing in Levy teaches that Arosurf® MSF comprises a synthetic oil lubricant or grease. Appellant defines these synthetic oils or greases thereof on pages 9-13 of the written description inter alia as low molecular weight polyolefins, ester lubricants, polyglycols, silicones, organic phosphates, polyphenyl ethers, silicates, chlorinated aromatics, and fluorocarbons, or at page 30, as a two-mole ethoxylate of isostearyl alcohol, none of which encompass the film forming agent Arosurf® MSF.

Further with regard to appellant's September 7, 2001, amendment and remarks relating to the Levy patent, the "consisting essentially of" terminology of the claims, such as claim 42, excludes the use of Arosurf® MSF or its equivalents by itself.

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The claims, such as claims 29, 35, and 42, however, could include Arosurf® MSF, or its equivalents only when used in combination with one of the generic, subgeneric or species of lubricants disclosed and/or claimed in the present application, provided the use of Arosurf® MSF, or its equivalents did not materially alter the properties of the presently claimed invention. See, PPG Industries v. Guardian Industries Corp., 156 F.3rd 1351, 1354, 48 U.S.P.Q. 2d 1351, 1353-54 (Fed. Cir. 1998).

E. Claims 29, 35-36 and 41-43 Are Not Obvious Under 35 U.S.C. § 103(a) and Traverse

The Examiner rejects claims 29, 35-36, and 41-43 under 35 U.S.C. §103(a) as unpatentable over Sayad et al., United States Patent No. 3,336,225 ("Sayad") combined with admitted prior art in view of Hopkins, Jr. et al., United States Patent No. 5,362,766 ("Hopkins") and Geursen et al., United States Patent No. 5,534,304 ("Geursen") and its counterpart WO 93/182,263.

Appellant distinguishes Sayad since the reference only teaches water soluble acrylamides and not superabsorbent polymers that absorb greater than about 100 times their weight in water. The two polymers are not the same. Superabsorbent polymers swell when combined with water, but do not dissolve in water. Water soluble acrylamides, as the term implies, dissolve in water. Sayad employs water soluble acrylamides in combination with an aqueous soap solution in a method for reducing friction on a conveyor, but does not use superabsorbent polymers. In addition, Sayad fails to teach or suggest appellant's lubricant additives with the aqueous soap solution.

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The Examiner nonetheless asserts that Sayad discloses a superabsorbent polymer even though she cannot find anything in the reference to support her conclusion. In fact, if Sayad did contain this teaching, the Examiner would not have to resort to combining the teachings of Sayad with other references that specifically describe superabsorbent polymers. In making this combination, however, the Examiner argues "the Admitted Prior Art, Hopkins and the Geursen patents provide teachings that the polymers of Sayad are known and are known for absorbing greater than 100 times its weight in water and especially are combined with conventional additives and lubricants for reducing frictions.[sic]" (Dec. 19 Office Action, p. 7, 3rd full paragraph). Nonetheless the Examiner does not point to anything in this combination of references that show Sayad describes superabsorbent polymers. She cannot, since Sayad does not contain this teaching.

Hopkins describes a method for combining a superabsorbent polymer with a "matrix" material such as cellulose acetate, methacrylate polymers, polyvinyl acetate, copolymers and combinations of these polymers. (Hopkins, col. 1, lines 29-35; col. 2, lines 10-19). The "matrix" material further includes "plasticizers" (col. .2, line 23) which, the skilled artisan knows increases the flexibility of the matrix material, i.e., cellulose acetate, methacrylate polymers, polyvinyl acetate, copolymers and combinations of these polymers. Webster's Ninth New Collegiate Dictionary defines "matrix" as a "material in which something is enclosed or embedded (as for protection or study)." Hopkins obviously uses the matrix to envelop particles of the superabsorbent polymer in describing the invention as "providing a matrix material in a suitable solvent; mixing particles of a superabsorbent polymer into said solutioned matrix material to form a

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suspension; homogenizing the suspension; and removing the solid from the suspension." (Col. 1, lines 30-35) (emphasis added). The foregoing description clearly conveys that Hopkins only dissolves the matrix in a solvent and not the superabsorbent polymer, but rather mixes particles of the superabsorbent polymer into the solution of the matrix in the solvent to form a "suspension."

In fact, Hopkins defines the term "suspension" as a "mixture containing a substantially uniform distribution of solute and particulate matter through the liquid carrier." (Col. 2, lines 30-33). There can be no doubt that Hopkins by referring to the "particles of a superabsorbent polymer" in this section, further confirms the end product comprises a matrix of materials such as cellulose esters that envelop particles of superabsorbent polymer.

The subsequent disclosure relative to the plasticizers clearly teaches that these plasticizers combine with the matrix material and not with the superabsorbent polymer. Hopkins in this regard states that the "matrix material may further comprise additives [such as] plasticizers . . ." (Col. 2, lines 19-23).

Thus the addition of plasticizers such as glycerin to the Hopkins composition addresses the need to plasticize the matrix material and in no way would teach a person with ordinary skill in the art that the plasticizers combine with the super absorbent polymer.

The examples describe adding a solution of cellulose acetate in acetone in combination with a superabsorbent polymer (Sanwet® IM-1000) and glycerine (a plasticizer) to a high shear mixing apparatus to form a solution, which when subsequently cast into films and air dried retains a 0.9% saline solution. Although

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Hopkins combines a superabsorbent polymer with acetone in the examples, the skilled artisan knows that acetone will not dissolve superabsorbent polymers such as Sanwet® IM-1000, and that in essence the combination of acetone and superabsorbent polymer comprises a slurry of particles of the superabsorbent polymer in the acetone in order to facilitate introducing it into the solution of cellulose acetate. Furthermore, Hopkins had no awareness of any lubricating properties of the combination of cellulose acetate or other matrix materials with a superabsorbent polymer.

Hopkins fails to teach a utility for the combination of superabsorbent polymer and matrix material. The reference describes the matrix material as having good absorbent and retention properties and further immobilizes the superabsorbent polymer. (Col. 1, lines 18-19). Hopkins further indicates the matrix materials "can be made porous as would be desirable for filtration membranes." (Col. 1, line 66, Col. 2, lines 7-9).

The reference constitutes nonanalogous art in that it fails to teach anything about the formation of a lubricant or the use of the disclosed material for the purpose of lubrication. Appellant no longer relies on the "consisting essentially of" terminology in the claims to distinguish Hopkins.

Both Geursen references have the same written description and appellant will refer to the U.S. Patent 5,534,304 to discuss the Guersen teachings. Guersen discloses a process for treating a substrate such as a fiber or fibrous product with a superabsorbent material. Geursen, without specifically mentioning it, faces a problem of applying a superabsorbent polymer coating to a substrate from a liquid medium. The superabsorbent polymer employed by Geursen does not dissolve in water, so Geursen forms an emulsion (actually a suspension) of the polymer in water by polymerizing the

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water soluble monomer in a water in oil medium to form the polymer in the aqueous phase of the emulsion (Col. 4, lines 1-16). Geursen uses the emulsion as a coating, and subsequently heat treats it to drive off the water phase and oil phase, generally a relatively low boiling paraffin hydrocarbon. (Col. 3, lines 15-23). Geursen also discloses commercially available water-in-oil emulsions prepared in the same way, which may also include additives, such as lubricants and emulsifying agents. (Col. 4, lines 17-26; 42-47).

The disclosed aqueous polymerization of the monomer into a superabsorbent polymer appears to prevent Geursen from obtaining a polymer that absorbs greater than about 100 times its weight in water. The subsequent analysis of the Geursen examples will show that the reference contains experimental data showing the production of superabsorbent polymers that absorb only about 45 times their weight in water. Geursen therefore lacks an enabling disclosure of how to produce oil in water emulsions of superabsorbent polymers that absorb greater than about 100 times their weight in water.

The reference describes yarns coated with a superabsorbent polymer composition which have a "swelling value" (Col. 7, lines 19-44) defined by a formula (Col. 7, lines 45-51). The swelling value consists of a number that indicates the relative water absorbency of the yarn or the yarn coated with the superabsorbent polymer composition.

Again, Geursen does not teach or suggest superabsorbent polymers that can absorb greater than about 100 times their weight in water for the process or product disclosed, as an analysis of the data in columns 9 and 10 bears out. Table A, reports

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experimental data for the swelling values of yarn samples coated with a water-in-oil emulsion where the yarn is a polyester yarn, with the untreated polyester yarn having a swelling value of 9. Using the formula in col. 7, lines 45-51:

$$\text{swelling value} = \frac{(a - b) \times 100}{b}$$

Arbitrarily setting the weight of the yarn (the value for "a") at 100 grams will give the dry weight of the yarn (the value for "b") as follows:

Example 1 Swelling value of uncoated yarn = 9 (Col. 9, lines 34-35)

$$\frac{100-b}{b} = 0.09$$

$$100 = 1.096b$$

$$b = 91.74 \text{ (dry weight of yarn)}$$

$$\text{Yarn water absorption} = 100 - 91.74 = 8.26$$

Example 1 Swelling value of coated yarn = 114 (Col. 9, line 28)

$$\frac{100-b}{b} = 1.14$$

$$100 = 2.146b$$

$$b = 46.72 \text{ (dry wt. of yarn and superabsorbent polymer)}$$

$$\text{Coated yarn water absorption} = 100 - 46.72 = 53.28$$

$$53.28 - 8.26 = 45.02 \text{ water absorbed by superabsorbent polymer}$$

$$46.27 \times 2.1\% \text{ polymer (Col 9, line 28)} = 0.97 \text{ superabsorbent polymer on yarn}$$

$$\underline{45.02} = 46.3 \text{ Superabsorbent polymer absorbs 46.3 times its}$$

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0.97

weight in water.

This shows that 0.97 grams of superabsorbent polymer picked up or absorbed 45.02 grams of water or 46.3 times its weight in water, less than one half of that of appellant's claimed superabsorbent polymer which absorbs greater than about 100 times its weight in water. The same calculations will show the superabsorbent polymer of experiment 4 (Table B) coated on a nylon-6,6 yarn absorbs about the same amount of water, i.e., less than about one half appellant's claimed superabsorbent polymer that absorbs greater than about 100 times its weight in water.

These data from Geursen clearly suggest that the inventors did not know how to combine a lubricant with a superabsorbent polymer that absorbs greater than about 100 times its weight in water. Since the reference does not disclose this type of polymer or how to produce it, Geursen does not contain an enabling disclosure.

The Examiner, however, refuses to acknowledge either these, or the foregoing analysis, claiming it is "irrelevant with respect to the water absorbance of the SAP [superabsorbent polymer] prior to adding it to a composition." (December 19 Office Action, p. 9, first par.) The Examiner does not articulate why the data have no relevance to the Geursen teachings, but only dismisses them without any reason. Recent case law reiterates that the Examiner cannot do this. She has to give a reason why the proffered data have no relevance. Cf., In re Lee, No. 00-1158, slip op. at 8 (Fed. Cir., January 18, 2001) ("[w]hen they [the Board of Appeals] assert general knowledge to negate patentability, that knowledge must be articulated and placed on the record.") (emphasis added).

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The Examiner also attempts to dismiss this shortcoming of Geursen by arguing "the fact that applicant has recognized another advantage which would flow naturally from following the suggestions of the prior art cannot be the basis for patentability when the differences would be otherwise obvious." (December 19 Office Action p. 8, 1st full par.) (citation omitted).

Because Geursen teaches suspensions of superabsorbent polymers (made by emulsion polymerization) that absorb only about 45 times their weight in water, the reference clearly raises the question of how the skilled artisan gets over the hurdle of this water absorbency of 45 to arrive at appellant's lower limit of water absorbency greater than about 100? The reference doesn't provide any information in this regard, and as indicated previously, appears to teach an emulsion polymerization method that precludes these higher limits. The reference clearly lacks an enabling disclosure, and the Examiner has not met the burden of providing evidence that Geursen does in fact show a suspension polymer in an aqueous medium suitable for coating a substrate, where the polymer absorbs greater than about 100 times its weight in water. Lacking this evidence, the rejection cannot stand. In re Lee.

The Examiner admits that appellant's claims differ from the cited references by requiring that the superabsorbent polymer absorbs greater than about 100 times its weight in water. (July 5, 2001 Office Action, p. 7, first full paragraph.) She nonetheless takes the position that the skilled artisan would find it obvious to use a superabsorbent polymer that absorbs greater than about 100 times its weight in water especially in view of the admitted prior art and Hopkins.

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Appellant respectfully disagrees since the combined teachings of the references still don't inform the skilled artisan how to combine a lubricant with a superabsorbent polymer that absorbs greater than about 100 times its weight in water. Again, Hopkins only describes a superabsorbent polymer particles enveloped by a plasticized "matrix" based on cellulose acetate, methacrylates or vinyl acetate polymers and copolymers or mixtures thereof, which has to be viewed with Guersen who did not disclose how to formulate a composition with a superabsorbent polymer that absorbs greater than about 100 times its weight in water. This does not comprise appellant's invention since the claims of the application do not relate to cellulose acetate or other Hopkins polymers that have been softened with a "plasticizer" nor a polymer as taught by Guersen that absorbs only about 45 times its weight in water.

Appellant has shown that in the present invention he can combine a lubricating material with a superabsorbent polymer that absorbs more than about 100 times its weight in water, contrary to Guersen, but that does not limit the appellant's invention to the specific method he discloses for making the combination of superabosrbent polymer and lubricant. Appellant can claim the composition of matter, irrespective of the method employed for obtaining it. The Examiner fails to cite any authority that restricts the appellant to claiming only the method of manufacturing the composition in lieu of claims to the composition itself, which she apparently requires (December 29, 2001 Office Action, p.2).

The Examiner rejects claims 30-34 and 37-40 under 35 U.S.C. §103(a) as unpatentable over Sayad combined with Admitted Prior Art in view of Hopkins and Guersen, and further in view Schey and Booser.

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Appellant distinguishes Sayad, the Admitted Prior Art, Hopkins, and Guersen for all the reasons previously set out in this brief. The references to Schey and Booser merely describe lubricant technology that appellant already referred to in Kirk-Othmer Encyclopedia of Chemical Technology, Second Edition, pp. 559-595 in the last paragraph on page 18 of the written description. The various lubricants and lubricating systems described in Schey and Booser only elaborate on the description of the lubricant materials appellant included in the written description.

F. The References Provide No Motivation to Combine Their Teachings

The references provide no motivation for a person of ordinary skill in the art to combine or modify their teachings and arrive at appellant's invention, nor do they teach the desirability of the combination, or that an advantage or expected beneficial result would have followed from their combination. M.P.E.P. §§ 2143, 2143.01, 2143.02, and 2144, and cases cited therein.

The Examiner "has to point to some teaching, suggestion or motivation in the prior art to select and combine the references that . . . [she] relied on to show obviousness." In re Lee, No. 00-1158 slip op. at 4 (Fed. Cir., January 18, 2001) (emphasis added). "When patentability turns on the question of obviousness, the search for and analysis of the prior art includes evidence relevant to select and combine the references relied on as evidence of obviousness...the central question is whether there is a reason to combine references." Lee, slip op. at 5 (emphasis added) (citation omitted). Appellant submits that the Examiner has not pointed to anything in the cited

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references that would lead a person with ordinary skill in the art to combine their teachings.

In rejecting the claims on a combination of references, the Examiner has Levy teaching a superabsorbent polymer in combination with a bioactive material, Sayad teaching a water soluble polymer and not a superabsorbent polymer in combination with a soap as a lubricant, Hopkins teaching a polymer such as cellulose acetate with a plasticizer, as a matrix for a superabsorbent material, and Geursen teaching a superabsorbent polymer absorbing only about 45 times its weight in water applied to a substrate as a water in oil emulsion, followed by removing the oil phase (a paraffinic hydrocarbon) by evaporation.¹ Adding Brannon-Peppas, Schey and Booser to the mix gives the Examiner citations to show the art contains teachings of superabsorbent polymers that absorb greater than about 100 times their weight in water, as well as extensive disclosures of lubricant materials and technology, but appellant disclosed this in the written description when he filed the application. Where then, in all of these references, can a skilled artisan find a teaching, suggestion, or motivation to pick and chose from them, and then combine the pieces to arrive at appellant's invention, that broadly comprises a lubricant in combination with a superabsorbent polymer that absorbs greater than about 100 times its weight in water? Appellant submits the skilled artisan couldn't without appellant's disclosure in front of them.

¹ As pointed out on page 17 of this brief, Geursen couldn't show how to make a superabsorbent polymer that absorbs greater than about 100 times its weight in water in combination with other materials to form the disclosed water in oil emulsion. Geursen lacks an enabling disclosure in this respect.

A 35 U.S.C. § 103 rejection cannot stand if it amounts to taking appellant's "claims as a frame and the prior art references as a mosaic to piece together a facsimile of the claimed invention." W. L. Gore & Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 1551, 220 U.S.P.Q. 303 (Fed. Cir. 1983).

G. The Examiner Has Improperly Relied on Non-Analogous Art to Make The Rejection

By combining the teachings of the various references under 35 U.S.C. § 103, the Examiner has relied on non-analogous art since the references are not related to the same field of endeavor or reasonably pertinent to the problem addressed by the inventor. In re Clay, 966 F.2d, 656, 23 U.S.P.Q. 2d at 1058 (Fed. Cir. 1992).

The Examiner cannot combine Sayad with the other references since Sayad does not teach superabsorbent polymers. Further, the Levy patent relates to bioactive compositions as well as delivering these bioactive compounds to a targeted environment. Hopkins also falls into the category of non-analogous since the reference describes a polymeric matrix for a superabsorbent polymer having no disclosed utility.

A person with ordinary skill in the lubricant art would not consider looking to the bioactive arts to develop a product that would fulfill a perceived need in the lubricating arts and vice versa. The combination of references does not relate to the same field of endeavor nor is it "reasonably pertinent to the problem with which the inventor is involved." Clay, 966, F.2d at 658, 23 U.S.P.Q. 2d at 1060. The lubricant arts do not fall into the same field of endeavor as the bioactive compositions and processes of the Levy patent. Clearly, the Levy bioactive compositions and processes are not

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reasonably pertinent to the problem, which the inventor, Dr. Levy is concerned with in the present application, i.e., lubricants and lubricating processes.

The fact that Dr. Levy, the inventor of the present application and the inventor in the Levy patents, has worked in both the fields of bioactive materials and lubricants does not provide the nexus between the superabsorbent polymers/bioactive materials and superabsorbent polymers/lubricants. In the first instance, the present application is not prior art that can be used to show the level of skill in a superabsorbent polymer art. More important, the total lack of evidence supporting a relationship between bioactive materials and lubricants forecloses any argument that these two areas comprise related fields of scientific or technological endeavor. The similarity has to reside in the nature of the scientific or technological fields, and not the fact that one scientist with multiple disciplines works in both. The inquiry is whether the field of delivering biologically active materials to a target area suggests lubricants or vice versa. Clearly, they do not.

H. The Claims Do Not Stand or Fall Together

Claim 29 comprises a generic claim to a lubricating composition of matter which is a superabsorbent polymer combined with material for decreasing friction between moving surfaces and generically sets out various lubricant materials. The balance of the claims directly or indirectly depend on claim 29, however define the superabsorbent polymer as based on acrylic acid, an acrylic ester, acrylonitrile, acrylamide, copolymers thereof or mixtures thereof. In the unlikely event that the Examiner would be able to show any acrylic resin for this particular application, appellant has the option of rebutting the rejection with data showing why the specific polymers as well as the

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particular lubricants contained in the claims have new, different, or unexpected properties.

Similarly, claims 30 and 31 differ from one another in that claim 30 sets out petroleum oil lubricants or greases as a lubricant whereas claim 31 sets out solid lubricants. Appellant again, in the unlikely event that the Examiner could show the prior art teaches one of the lubricants in combination with the superabsorbent polymers, can show new, unexpected or nonobvious results employing one type of lubricant or polymer as opposed to another.

Claim 32 dependent on claim 31 relates to species of solid lubricants subgenerically set out in claim 31 and appellant also would have the opportunity to show new, unexpected and unobvious results employing the lubricant materials of claim 32 over the subgeneric lubricating materials of claim 31.

The balance of the claims also stands in the same relationship of subgeneric claims to species claims centered around the particular lubricant. Appellant in each instance has the right to submit evidence to show the species claims have properties that would not be foreshadowed by all of the species that fall into the subgeneric claims from which they depend.

I. The Provisional Double Patenting Rejection

The Examiner provisionally rejects claims 29-43 under the judicially created doctrine of obviousness-type double patenting in view of copending application Serial No. 09/359,809 filed July 23, 1999. Appellant points out that the present Examiner has also issued a provisional double patenting rejection in copending application Serial No.

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09/359,809, which has not issued as a patent. Appellant should not be required to file a terminal disclaimer in the present application since the Patent Office may not allow the copending application which forms the basis of the double patenting rejection. When a provisional double patenting rejection is the sole remaining rejection in an application otherwise in condition for allowance, the M.P.E.P. states that the Examiner should withdraw the rejection in the application and permit it to issue as a patent. M.P.E.P. § 804(I.)(B) p. 800 -15 July 1998.

Conclusions

Appellant requests the board to reverse the Examiner in all respects and remand the application to the Examiner for the issuance of a Notice of Allowance. If entry of this Brief on Appeal requires an extension of time pursuant to 37 C.F.R. § 1.136 and payment of an extension fee or other fee, any of which this Brief does not account for, appellant's attorneys request such an extension and payment of any fee due from their deposit account 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,
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Dated: March 1, 2002

By:

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(9) Appendix

Claims on Appeal

29. A lubricating composition of matter consisting essentially of a superabsorbent polymer that absorbs greater than about 100 times its weight in water combined with a material for decreasing friction between moving surfaces wherein said material for decreasing friction is a petroleum oil lubricant or grease thereof, a solid inorganic compound, a solid organic compound, water containing a lubricant additive, a phosphate, a fatty oil, fatty acid or wax, a synthetic oil-lubricant, or grease thereof, or a soap, and mixtures thereof.

30. The composition of claim 29 where said lubricating composition consists essentially of a superabsorbent polymer combined with a material for decreasing friction between moving surfaces, where said superabsorbent polymer absorbs greater than about 100 times its weight in water and is a polymer of acrylic acid, an acrylic ester, acrylonitrile, acrylamide, co-polymers thereof or mixtures thereof, wherein said material for decreasing friction is a petroleum oil lubricant or grease thereof, and wherein said material for decreasing friction optionally contains a lubricant additive, wherein said lubricant additive is an antioxidant, rust inhibitor, antiwear compound, extreme pressure additive, detergent, dispersant, pour point depressant, viscosity-index improver, or foam inhibitor.

31. The composition of claim 29 where said lubricating composition consists essentially of a superabsorbent polymer combined with a material for decreasing friction

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between moving surfaces, where said superabsorbent polymer absorbs greater than about 100 times its weight in water and is a polymer of acrylic acid, an acrylic ester, acrylonitrile, acrylamide, co-polymers thereof or mixtures thereof, wherein said material for decreasing friction is a solid lubricant, wherein said solid lubricant is an inorganic compound, carbon, or metal that provides barrier-layer lubrication, or mixtures thereof, and wherein said material for decreasing friction optionally contains a lubricant additive, wherein said lubricant additive is an antioxidant, rust inhibitor, antiwear compound, extreme pressure additive, detergent, dispersant, pour point depressant, viscosity-index improver, or foam inhibitor.

32. The composition of claim 31 where said solid organic lubricant is molybdenum disulfide, cobalt chloride, antimony oxide, niobium selenide, tungsten disulfide, mica, boron nitride, silver sulfate, cadmium chloride, cadmium iodide, borax, basic white lead, lead carbonate, lead iodide, asbestos, talc, zinc oxide, carbon, babbitt, bronze, brass, aluminum, gallium, indium, thallium, thorium, copper, silver, gold, mercury, lead, tin, indium, or the Group VIII noble metals or mixtures thereof.

33. The composition of claim 29 where said lubricating composition consists essentially of a superabsorbent polymer combined with a material for decreasing friction between moving surfaces, where said superabsorbent polymer absorbs greater than about 100 times its weight in water and is a polymer of acrylic acid, an acrylic ester, acrylonitrile, acrylamide, co-polymers thereof or mixtures thereof, wherein said material for decreasing friction is a solid organic lubricant, and wherein said material for

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decreasing friction optionally contains a lubricant additive, wherein said lubricant additive is an antioxidant, rust inhibitor, antiwear compound, extreme pressure additive, detergent, dispersant, pour point depressant, viscosity-index improver, or foam inhibitor.

34. The composition of claim 33 where said solid organic lubricant is a fluoroalkylene homopolymer or copolymer, a lower alkylene polyolefin homopolymer or co-polymer, a paraffinic hydrocarbon wax, phenanthrene, copper phthalocyanine, or mixtures thereof.

35. The composition of claim 29 where said lubricating composition consists essentially of a superabsorbent polymer combined with a material for decreasing friction between moving surfaces, where said superabsorbent polymer absorbs greater than about 100 times its weight in water and is a polymer of acrylic acid, an acrylic ester, acrylonitrile, acrylamide, co-polymers thereof or mixtures thereof, wherein said material for decreasing friction is water containing a lubricant additive, wherein said lubricant additive is an antioxidant, rust inhibitor, antiwear compound, extreme pressure additive, detergent, dispersant, pour point depressant, viscosity-index improver, or foam inhibitor.

36. The composition of claim 29 consisting essentially of a superabsorbent polymer with a material for decreasing friction between moving surfaces, wherein said superabsorbent polymer absorbs greater than about 100 times its weight in water and is a polymer of acrylic acid, an acrylic ester, acrylonitrile, acrylamide, co-polymers thereof or mixtures thereof, wherein said material for decreasing friction is an oil or greases

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thereof and water, optionally containing a lubricant additive, wherein said lubricant additive is an antioxidant, rust inhibitor, antiwear compound, extreme pressure additive, detergent, dispersant, pour point depressant, viscosity-index improver, or foam inhibitor.

37. The composition of claim 29 consisting essentially of a superabsorbent polymer with a material for decreasing friction between moving surfaces, wherein said superabsorbent polymer absorbs greater than about 100 times its weight in water and is a polymer of acrylic acid, an acrylic ester, acrylonitrile, acrylamide, co-polymers thereof or mixtures thereof, wherein said material for decreasing friction is a solid lubricant and water, optionally containing a lubricant additive, wherein said lubricant additive is an antioxidant, rust inhibitor, antiwear compound, extreme pressure additive, detergent, dispersant, pour point depressant, viscosity-index improver, or foam inhibitor.

38. The composition of claim 37 where said solid lubricant is graphite, molybdenum disulfide, cobalt chloride, antimony oxide, niobium selenide, tungsten disulfide, mica, boron nitride, silver sulfate, cadmium chloride, cadmium iodide, borax, basic white lead, lead carbonate, lead iodide, asbestos, talc, zinc oxide, carbon, babbitt, bronze, brass, aluminum, gallium, indium, thallium, thorium, copper, silver, gold, mercury, lead, tin, indium, the Group VIII noble metals, a fluoroalkylene homopolymer or copolymer, a lower alkylene polyolefin homopolymer or co-polymer, a paraffinic hydrocarbon wax, phenanthrene, copper phthalocyanine, or mixtures thereof.

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39. The composition of claim 29 where said lubricating composition consists essentially of a superabsorbent polymer combined with a material for decreasing friction between moving surfaces, where said superabsorbent polymer absorbs greater than about 100 times its weight in water and is a polymer of acrylic acid, an acrylic ester, acrylonitrile, acrylamide, co-polymers thereof or mixtures thereof, wherein said material for decreasing friction is a phosphate, and wherein said material for decreasing friction optionally contains a lubricant additive, wherein said lubricant additive is an antioxidant, rust inhibitor, antiwear compound, extreme pressure additive, detergent, dispersant, pour point depressant, viscosity-index improver, or foam inhibitor.

40. The composition of claim 39 where said material for decreasing friction is zinc phosphate, iron phosphate or manganese phosphate, or mixtures thereof.

41. The composition of claim 29 where said lubricating composition consists essentially of a superabsorbent polymer combined with a material for decreasing friction between moving surfaces, where said superabsorbent polymer absorbs greater than about 100 times its weight in water and is a polymer of acrylic acid, an acrylic ester, acrylonitrile, acrylamide, co-polymers thereof or mixtures thereof, wherein said material for decreasing friction is a fatty oil, fatty acid or wax, or mixtures thereof and wherein said material for decreasing friction optionally contains a lubricant additive, wherein said lubricant additive is an antioxidant, rust inhibitor, antiwear compound, extreme pressure additive, detergent, dispersant, pour point depressant, viscosity-index improver, or foam inhibitor.

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42. The composition of claim 29 where said lubricating composition consists essentially of a superabsorbent polymer combined with a material for decreasing friction between moving surfaces, where said superabsorbent polymer absorbs greater than about 100 times its weight in water and is a polymer of acrylic acid, an acrylic ester, acrylonitrile, acrylamide, co-polymers thereof or mixtures thereof, wherein said material for decreasing friction is a synthetic oil lubricant, or grease thereof, and wherein said material for decreasing friction optionally contains a lubricant additive, wherein said lubricant additive is an antioxidant, rust inhibitor, antiwear compound, extreme pressure additive, detergent, dispersant, pour point depressant, viscosity-index improver, or foam inhibitor.

43. The composition of claim 29 where said lubricating composition consists essentially of a superabsorbent polymer combined with a material for decreasing friction between moving surfaces, where said superabsorbent polymer absorbs greater than about 100 times its weight in water and is a polymer of acrylic acid, an acrylic ester, acrylonitrile, acrylamide, co-polymers thereof or mixtures thereof, wherein said material for decreasing friction is a soap, and wherein said material for decreasing friction optionally contains a lubricant additive, wherein said lubricant additive is an antioxidant, rust inhibitor, antiwear compound, extreme pressure additive, detergent, dispersant, pour point depressant, viscosity-index improver, or foam inhibitor.

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